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s a Jinclude the elected species of structures, k	ceywords, synonyms, acron	yms, and registry numbers, ai	nd combine with the conc	
utility of the invention. Define any terms known. Please attach a copy of the cover			vant citations, authors of	c2/it
Title of Invention:	IC POLYM	FRE AND TH	HANCE WORK	
Inventors (please provide full names):			A STATE OF THE PARTY OF THE PAR	STATE OF THE STATE
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Earliest Priority Filing Date:	-/1	the state of the s		
For Sequence Searches Only* Please inclu		parent, child, divisional, or issu	ed patent numbers) along	invine
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Date Completed: 1. (a) 1. (b) 1. (c) 1. (c) 1. (d)	Litigation	Lexis/Nexis		
Searcher Prep & Review Time:	Fulltext	Sequence Systems		
Clerical Prep Time:	Patent Family	WWW/Internet		777

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We claim:

- A cationic polymer obtainable by free-radical copolymerization of
 - (a) from 50 to 70% by weight of one or more monomers of the formula I

 $\begin{array}{c|c} & & & & \\ & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\ & & & \\ & & & \\ & & & \\$

(b) from 5 to 45% by weight of one or more monomers of the formula II

$$CH_2 \longrightarrow N \qquad O \qquad (II)$$

where n = 1 to 3,

- (c) from 5 to 40% by weight of a monoethylenically unsaturated monomer having at least one amine-containing group,
 - (d) from 0 to 5% by weight of a polyalkylene oxide-containing silicone derivative,

where up to 40% by weight, based on (a), (b), (c) and (d), of the monomer (a) can be replaced by a monomer of the formula I where $R^2 = C_2-C_{22}$ -alkyl.

- 40 2. A polymer as claimed in claim 1, obtainable by free-radical copolymerization of
 - (a) from 51 to 65% by weight of the monomer of the formula I,
 - (b) from 7 to 39% by weight of the monomer of the formula II,
 - (c) from 10 to 30% by weight of the amine-containing monomer.

- 3. A polymer as claimed in claim 1, wherein the monomer (a) is tert-butyl acrylate, N-tert-butylacrylamide and/or tert-butyl methacrylate.
- 5 4. A polymer as claimed in claim 1, wherein the monomer (b) is vinylpyrrolidone and/or vinylcaprolactam.
- A polymer as claimed in claim 1, wherein the monomer (c) is dimethylaminoalkyl (meth)acrylate and/or dimethylaminoalkyl (meth)acrylamide.
- 6. A polymer as claimed in claim 1, wherein the monomers of the formula I where $R^2 = C_2 C_{22}$ -alkyl are N-butylacrylamide, N-octylacrylamide, lauryl (meth)acrylate or stearyl (meth)acrylate.
 - 7. The use of polymers as claimed in claim 1 to 6 for cosmetic preparations.
- 20 8. The use as claimed in claim 7 as setting polymers in hair spray, foam setting compositions, hair mousse, hair gel or shampoos.
- 9. A cosmetic preparation comprising a polymer as claimed in claim 1 in an amount of from 0.1 to 30% by weight, based on the preparation
- 10. A cosmetic preparation as claimed in claim 9, wherein the polymer is partially or completely neutralized using a monohydric acid, preferably using a polyhydric acid or a polycarboxylic acid, or is quaternized using a quaternizing agent.
- 11. A cosmetic preparation as claimed in claim 10, wherein the polymer is partially or completely neutralized using phosphoric acid or an acid mixture containing phosphoric acid.
- 12. The use of polymers as claimed in one of claims 1 to 6 having a glass transition temperature of > 25°C and a K value of from 25 to 70, preferably from 35 to 50, for hair cosmetics.
 - 13. A hair cosmetic preparation comprising

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- (a) from 0.2 to 20% by weight of a polymer as claimed in one of claims 1 to 6,
- (b) from 0 to 10% by weight of a conventional hair-setting
 polymer,
 - (c) from 0 to 1% by weight of a water-dispersible siloxane-containing compound,
- (d) from 30 to 99.5% by weight of a solvent or solvent mixture of alcohol and water,
 - (e) from 0 to 60% by weight of a propellant comprising dimethyl ether and/or propane/butane, and
 - (f) from 0 to 0.3% by weight of a cosmetically suitable additive.
- 14. The use as claimed in claim 7 as a constituent in cosmetic skin preparations.
 - 15. The use as claimed in claim 14, wherein a fatty acid amide is additionally used.

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Abstract

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Cationic polymers are obtainable by free-radical copolymerization of

(a) from 50 to 70% by weight of one or more monomers of the
formula I

$$\begin{array}{c|c}
R^1 \\
C \\
R^2
\end{array}$$

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X = 0, NR^1 ,

 $R^1 = H, C_1-C_8-alkyl,$

 R^2 = tert-butyl,

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(b) from 5 to 45% by weight of one or more monomers of the formula II

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$$CH_2 \longrightarrow N \qquad O \qquad (II)$$

where n = 1 to 3,

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- (c) from 5 to 40% by weight of a monoethylenically unsaturated monomer having at least one amine-containing group,
- (d) from 0 to 5% by weight of a polyalkylene oxide-containing silicone derivative,

where up to 40% by weight, based on (a), (b), (c) and (d), of the monomer (a) can be replaced by a monomer of the formula I where $R^2 = C_2-C_{22}-alkyl$.

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FUBARA 09/762,039

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(FILE 'HOME' ENTERED AT 14:48:30 ON 16 OCT 2001)

FILE 'REGISTRY' ENTERED AT 14:48:56 ON 16 OCT 2001 ACT FUB039P/A

L1 L2 L3			STR SCR 2043 AND 2127 STR	
L4		1732	SEA FILE=REGISTRY SSS FUL L1 AND L3 AND L2	
L5			S S PVIN/PCT AND N/ELS	
L6		1725	5 S L4 AND L5	
L7		160	S L6 AND SI/ELS	
L8		160	OS L6 AND SI/ELS OS L7 AND NC>2 cop do w/ components A, B, C \$ D PLUS' ENTERED AT 14:50:46 ON 16 OCT 2001	
	FILE	'HCAP	PLUS' ENTERED AT 14:50:46 ON 16 OCT 2001	
L9		67	7 S L8	
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L11		10	S L9 AND (HAIR OR COSMETIC)	
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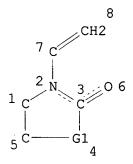
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VAR G1=H/11VAR G2=0/8 NODE ATTRIBUTES: CONNECT IS E1 RC AT CONNECT IS E1 RC AT CONNECT IS E1 RC AT DEFAULT MLEVEL IS ATOM DEFAULT ECLEVEL IS LIMITED ECOUNT IS M2 C AT 5 IS X10 C AT ECOUNT ECOUNT IS X10 C ΑT 11

GRAPH ATTRIBUTES: RING(S) ARE ISOLATED OR EMBEDDED NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE

L2 SCR 2043 AND 2127 L3 STR



REP G1=(1-3) CH2 NODE ATTRIBUTES: CONNECT IS E2 RC AT DEFAULT MLEVEL IS ATOM

FUBARA 09/762,039

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC I

NUMBER OF NODES IS 8

STEREO ATTRIBUTES: NONE

L4	1732	SEA	FILE=REGISTRY	SSS FUL	L1 AND	L3 AND L2
L5	71943	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	PVIN/PCT AND N/ELS
L6	1725	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	L4 AND L5
L7	160	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	L6 AND SI/ELS L7 AND NC>2
L8	160	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	L7 AND NC>2
L9	67	SEA	FILE=HCAPLUS A	ABB=ON	PLU=ON	L8

L12 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2001 ACS ACCESSION NUMBER: 1995:994509 HCAPLUS

DOCUMENT NUMBER:

124:90196

TITLE:

Polymers containing organopolysiloxane side chains

useful as textile finishing agents and

cosmetics and manufacture of the same

INVENTOR(S):

Shimizu, Yoshio; Takizawa, Masahiro; Isoda, Masanori;

Shibazaki, Kenichiro; Nakayama, Kiyoshi

PATENT ASSIGNEE(S):

SOURCE:

Lion Corp., Japan PCT Int. Appl., 157 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

Japanese

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9523889 W: CN, KR,	A1 US	19950908	WO 1995-JP353	19950303
RW: AT, BE,	CH, DE	, DK, ES,	FR, GB, GR, IE, IT, LU	, MC, NL, PT, SE
JP 07243173	A2	19950919	JP 1994-60335	19940303
JP 07070204	A2	19950314	JP 1994-75368	19940322
JP 07268778	A2	19951017	JP 1994-75369	19940322
JP 07069828	A2	19950314	JP 1994-169059	19940628
JP 08183826	A2	19960716	JP 1994-340249	19941229
PRIORITY APPLN. INFO	.:		JP 1994-60335	19940303
•			JP 1994-75368	19940322
			JP 1994-75369	19940322
			. JP 1994-169059	19940628
			JP 1994-340249	19941229
			JP 1993-187185	19930630
			JP 1993-187186	19930630

The polymers consist of vinyl polymers having wt.-av. mol. wt. 5000-5,000,000 and having organopolysiloxane side chains bearing no. of Si 2-500 or polysaccharides contg. organopolysiloxane side chains or protein compds. contg. organopolysiloxane side chains and are useful as agents for improvement of softness and resilience of textiles, hair rinses, hair sprays, shampoos, and shaving creams. Thus, 15 parts CH2:CMeCO2(CH2)3(SiMe2O)nSiMe3 (n = 133) was copolymd. with 2 parts CH2:CMeCO2CH2CH(OH)CH2O2CCH2S(CH2CH2CO2Bu)m (m = 45) and 80 parts acrylamide to give an organopolysiloxane side chain-contg. polymer (I) sol. in EtOH or iso-PrOH. A cotton broadcloth was treated with an aerosol compn. contg. I and dried to give a fabric with softness rating (6 softness similar to that of a cationic softener-treated fabric, 1 hardness similar to that of a spray-starched fabric) 5 and excellent surface smoothness and resilience.

IT 172489-39-3P

RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(manuf. of; for textile finishing agents and cosmetics)

RN 172489-39-3 HCAPLUS

CN 2-Propenoic acid, butyl ester, telomer with 2-mercaptopropanoic acid, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester, polymer with .alpha.-[dimethyl[3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl]silyl]-.omega.-[(trimethylsilyl)oxy]poly[oxy(dimethylsilylene)] and 1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)

CRN 123109-42-2 CMF (C2 H6 O Si)n C12 H26 O3 Si2 CCI PMS

CM 2

CRN 88-12-0 CMF C6 H9 N O

CM 3

CRN 172489-38-2

CMF C7 H12 O4 . x (C7 H12 O2)x . x C3 H6 O2 S

CDES 8:GD

CM 4

CRN 5919-74-4 CMF C7 H12 O4

CM 5

CRN 172351-44-9

CMF (C7 H12 O2)x . C3 H6 O2 S

CM 6

CRN 79-42-5 CMF C3 H6 O2 S

$$\begin{array}{c} \text{O} \\ \parallel \\ \text{n-BuO-C-CH-----} \text{CH}_2 \end{array}$$

L13 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER:

2001:369675 HCAPLUS

DOCUMENT NUMBER:

134:371580

TITLE:

Storage-stable hair conditioners containing

organopolysiloxane copolymers

INVENTOR(S):

Tachibana, Kiyomi; Nomura, Toshio

PATENT ASSIGNEE(S):

SOURCE:

Kosei Co., Ltd., Japan Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DOCUMENT TYPE:

Patent

LANGUAGE:

Japanese

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. A2 20010522

JP 2001139432 ΑŔ

JP 1999-321674

19991111

Hair conditioners contain copolymers from polylactone group-contg. monomers and organopolysiloxane monomers. CH2:CMeCO2(CH2)2O(COC5H10O)3H 35, CH2:CMeCO2C3H6SiMe2O(SiMe2O)24SiMe3 60, and Me methacrylate 5 g were copolymd. in the presence of AIBN to give a copolymer. A shampoo contq. the copolymer showed hair-styling, -smoothing, and -conditioning effects.

ΙT 340285-21-4P

RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

(hair conditioners contg. polylactone group-contg.

organopolysiloxane copolymers)

RN 340285-21-4 HCAPLUS

CN 2-Propenoic acid, 2-ethylhexyl ester, polymer with .alpha.-[dimethyl[3-[(2methyl-1-oxo-2-propenyl)oxy]propyl]silyl]-.omega.-[(trimethylsilyl)oxy]poly[oxy(dimethylsilylene)], 1-ethenyl-2pyrrolidinone and .alpha.-[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]-.omega.-hydroxypoly[oxy(1-oxo-1,6-hexanediyl)], graft (9CI) (CA INDEX NAME)

CM

CRN 123109-42-2

(C2 H6 O Si)n C12 H26 O3 Si2

CCI

· CM 2

CRN 81984-60-3

(C6 H10 O2)n C6 H10 O3 CMF

CCI PMS

CRN 103-11-7 CMF C11 H20 O2

$$\begin{array}{c} \text{O} \\ || \\ \text{CH}_2 - \text{O} - \text{C} - \text{CH} == \text{CH}_2 \\ || \\ \text{Et} - \text{CH} - \text{Bu-n} \end{array}$$

CM 4

CRN 88-12-0 CMF C6 H9 N O

L13 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2001 ACS 2001:366073 HCAPLUS

ACCESSION NUMBER: DOCUMENT NUMBER:

134:371594

TITLE:

Skin cosmetics containing organopolysiloxane

copolymers

INVENTOR(S):

Tachibana, Kiyomi; Nomura, Toshio

PATENT ASSIGNEE(S):

SOURCE:

Kosei Co., Ltd., Japan 'Jpn. Kokai Tokkyo Koho, 19 pp.

CODEN: JKXXAF

DOCUMENT TYPE:

Patent

LANGUAGE:

Japanese

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE -----_____ _____ JP 2001139415 A2 20010522 JP 1999-321673 19991111

AΒ Skin cosmetics contain copolymers from polylactone group-contg. monomers and organopolysiloxane monomers. CH2:CMeCO2(CH2)20(COC5H100)3H 35, CH2:CMeCO2C3H6SiMe2O(SiMe2O)24SiMe3 60, and Me methacrylate 5 g were copolymd. in the presence of AIBN to give a copolymer. Lipsticks contg. the copolymer were not sticky and showed good adhesion to lips.

TΤ 340285-21-4P

> RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (cosmetics contg. polylactone group-contg. organopolysiloxane

copolymers)

RN 340285-21-4 HCAPLUS 2-Propenoic acid, 2-ethylhexyl ester, polymer with .alpha.-[dimethyl[3-[(2-CN methyl-1-oxo-2-propenyl)oxy]propyl]silyl]-.omega.-[(trimethylsilyl)oxy]poly[oxy(dimethylsilylene)], 1-ethenyl-2pyrrolidinone and .alpha.-[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]-.omega.-hydroxypoly[oxy(1-oxo-1,6-hexanediyl)], graft (9CI) (CA INDEX NAME)

CM

CRN 123109-42-2

CMF (C2 H6 O Si)n C12 H26 O3 Si2

CCI PMS

CM2

CRN 81984-60-3

CMF (C6 H10 O2)n C6 H10 O3

CCI PMS

CRN 103-11-7 CMF C11 H20 O2

$$\begin{array}{c} \text{O} \\ \parallel \\ \text{CH}_2 - \text{O} - \text{C} - \text{CH} = \text{CH}_2 \\ \parallel \\ \text{Et} - \text{CH} - \text{Bu-n} \end{array}$$

CM 4

CRN 88-12-0 CMF C6 H9 N O

FUBARA 09/762,039

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L13 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2001 ACS ACCESSION NUMBER: 2001:217883 HCAPLUS

DOCUMENT NUMBER: 134:256593

TITLE: Polysiloxane block copolymers as bases for

hair-styling preparations

INVENTOR(S): Tsuchihashi, Koji; Uchiyama, Yujiro

PATENT ASSIGNEE(S): Osaka Yuki Kagaku Kogyo Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE

JP 2001081018 A2 20010327 JP 1999-256261 19990909

The hair-styling bases contain block copolymers prepd. by copolymn. of monomers including CH2:CR1COXR2N+Me2CH2CO2- (X = O, NH; R1 = H, Me; R2 = C2-3 alkylene) and ethylenically unsatd. carboxylate esters in the presence of polysiloxanes. The bases show good adhesion to hair, give good gloss to hair, and show hair -softening and -smoothing effects. A hair lotion contg. a block copolymer prepd. by polymn. of an azo-contg. dimethylpolysiloxane, methacryloyloxyethylenedimethylammonium carboxymethylbetaine, dimethylaminoethyl methacrylate, stearyl methacrylate, decyl methacrylate, and dodecyl methacrylate and neutralization of the copolymer with lactic acid was formulated.

IT 331284-82-3P

RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of betaine-contg. polysiloxane block copolymers as bases for hair-styling prepns.)

RN 331284-82-3 HCAPLUS

Ethanaminium, N-(carboxymethyl)-N,N-dimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]-, inner salt, polymer with .alpha.-[(3-aminopropyl)dimethylsilyl]-.omega.-[[(3-aminopropyl)dimethylsilyl]oxy]poly [oxy(dimethylsilylene)], 4,4'-azobis[4-cyanopentanoic acid], decyl 2-methyl-2-propenoate, 2-(dimethylamino)ethyl 2-methyl-2-propenoate, dodecyl 2-methyl-2-propenoate, N-ethenylacetamide, 1-ethenyl-2-pyrrolidinone and octadecyl 2-methyl-2-propenoate, block, 2-hydroxypropanoate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 50-21-5 CMF C3 H6 O3

OH | | Me— CH— CO₂H

CM 2

CRN 331284-81-2

CMF (C22 H42 O2 . C16 H30 O2 . C14 H26 O2 . C12 H16 N4 O4 . C10 H17 N O4 . C8 H15 N O2 . C6 H9 N O . C4 H7 N O . (C2 H6 O Si)n C10 H28 N2 O Si2)x

CCI PMS

CDES 8:PM, BLOCK

CM 3

CRN 97917-34-5

CMF (C2 H6 O Si)n C10 H28 N2 O Si2

CCI PMS

CM 4

CRN 62723-61-9 CMF C10 H17 N O4

CM 5

CRN 32360-05-7 CMF C22 H42 O2

$$\begin{array}{c|c} & \text{O} & \text{CH}_2 \\ \parallel & \parallel \\ \text{Me} - & \text{(CH}_2)_{17} - \text{O} - \text{C} - \text{C} - \text{Me} \end{array}$$

CM 6

CRN 5202-78-8 CMF C4 H7 N O

AcNH-CH-CH2

CM 7

CRN 3179-47-3 CMF C14 H26 O2

$$\begin{array}{c|c} & \text{O} & \text{CH}_2 \\ || & || \\ \text{Me- (CH}_2) & \text{9-O-C-C-Me} \end{array}$$

CM 8

CRN 2867-47-2 CMF C8 H15 N O2

$$\begin{array}{c|c} & \text{O} & \text{CH}_2 \\ \parallel & \parallel \\ \text{Me}_2 \text{N}-\text{CH}_2-\text{CH}_2-\text{O}-\text{C}-\text{C}-\text{Me} \end{array}$$

CM 9

CRN 2638-94-0 CMF C12 H16 N4 O4

$$\begin{array}{c} \text{Me} \\ | \\ \text{N} = \text{N} - \text{C} - \text{CH}_2 - \text{CH}_2 - \text{CO}_2 \text{H} \\ | \\ \text{HO}_2 \text{C} - \text{CH}_2 - \text{CH}_2 - \text{C} - \text{Me} \\ | \\ \text{CN} \end{array}$$

CM 10

CRN 142-90-5 CMF C16 H30 O2

$$$^{\rm O}_{\rm CH_2}$$$
 Me-(CH₂)₁₁-O-C-C-Me

CM 11

CRN 88-12-0 CMF C6 H9 N O

L13 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2001 ACS ACCESSION NUMBER: 1999:779109 HCAPLUS

DOCUMENT NUMBER: 132:23290

TITLE: Personal care composition containing a clear

homogeneous polymer of an N-vinyl lactam

INVENTOR(S): Liu, Kou-Chang

PATENT ASSIGNEE(S): Isp Investments Inc., USA

SOURCE: U.S., 7 pp., Cont.-in-part of U.S. 5,609,865.

CODEN: USXXAM

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 6

PATENT INFORMATION:

PA	rent	NO.		KI	ND	DATE			A	PPLI	CATI	ои ис	ο.	DATE				
US	5997	855		A		1999	1207		U	s 19	98-1	4465		1998	0128			
US	5523	369		Α		1996	0604		U	S 19	94-3	6525	7	1994	1228			
US	5609	865		A		1997	0311		U.	S 19	94-3	6525	8	1994	1228			
US	5626	836		Α		1997	0506		U	S 19	94-3	6525	9	1994	1228			
US	6110	454		Α		2000	0829		U	S 19	96-6	5549	2	1996	0530			
WO	9938	494												1999				
	W:	AL,	AM,	AT,	AU,	AZ,	BA,	BB,	BG,	BR,	BY,	CA,	CH,	CN,	CU,	CZ,	DE,	
		DK,	EE,	ES,	FI,	GB,	GD,	GE,	GH,	GM,	HR,	HU,	ID,	IL,	IN,	ıs,	JP.	
														MD,				
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											1446			1998				
												-		1999				

AΒ The patent describes a multicomponent homogeneous polymer of (a) from about 30 to about 90 wt.-% of a N-vinyllactam, (b) from about 5 to about 30 wt.-% of a quaternized and/or nonquaternized aminoalkylacrylic ester and/or amide, (c) from about 0.5 to about 30 wt.-% of an unsatd. monomer selected from the group consisting of an acrylic ester or amide having a C4-C22 alkyl group, a C4-C22 .alpha.-olefin, a C4-C22 vinyl ether (VE) and a vinyl ester of a C2-C22 carboxylic acid and (d) from about 1 to about 30 wt.-% of an unsubstituted acrylic or methacrylic acid and/or an unsubstituted amide of said acrylic or methacrylic acid and optionally, (e) up to 20 wt.-% of a mono- or di-functional polysiloxane; all monomers combined to form a 100% polymer compn. of randomly distributed monomers for use in personal care formulations, particularly as a hair fixative where the clear, colorless and conditioning film forming properties of the polymer produces a silky, lustrous appearance to the hair and long lasting styling hold.

IT 234764-51-3P, Acrylic acid-N-dimethylaminoethyl

methacrylate-dodecyl methacrylate-DS-443-N-vinylpyrrolidone copolymer RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(personal hair care compn. contg. clear homogeneous polymer of N-vinyllactam)

RN 234764-51-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymer with dodecyl 2-methyl-2-propenoate, .alpha.-(ethenyldimethylsilyl)-.omega.[(ethenyldimethylsilyl)oxy]poly[oxy(dimethylsilylene)],
1-ethenyl-2-pyrrolidinone and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 59942-04-0

CMF (C2 H6 O Si)n C8 H18 O Si2

CCI PMS

CM 2

CRN 2867-47-2 CMF C8 H15 N O2

$$\begin{array}{c|c} & \text{O} & \text{CH}_2 \\ \parallel & \parallel \\ \text{Me}_2\text{N-CH}_2\text{-CH}_2\text{-O-C-C-Me} \end{array}$$

CM 3

CRN 142-90-5 CMF C16 H30 O2

$$$^{\mbox{O}}_{\mbox{CH}_2}$$$
 Me- (CH2) 11-O-C-C-Me

CM 4

CRN 88-12-0 CMF C6 H9 N O

CM 5

CRN 79-10-7 CMF C3 H4 O2

L13 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2001 ACS ACCESSION NUMBER: 1999:495157 HCAPLUS

DOCUMENT NUMBER: 131:149061

TITLE: Personal care compositions containing a clear

homogeneous polymer of an N-vinyllactam

INVENTOR(S):
Liu, Kou-Chang

PATENT ASSIGNEE(S): ISP Investments Inc., USA SOURCE: PCT Int. Appl., 32 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 6

PATENT INFORMATION:

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PATENT NO.
                             KIND DATE
                                                        APPLICATION NO. DATE
                                                        -----
                                                     WO 1999-US946
      WO 9938494
                                     19990805
                                                                              19990113
                            A1
           W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,
                 DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN,
                 MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,
           TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES,
FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI,
CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
      US 5997855
                             Α
                                     19991207
                                                         US 1998-14465
                                                                               19980128
      AU 9922325
                             A1
                                     19990816
                                                         AU 1999-22325
                                                                               19990113
PRIORITY APPLN. INFO.: .
                                                                          A 19980128
                                                     US 1998-14465
                                                     US 1994-365257
                                                                           A2 19941228
                                                     US 1994-365258
                                                                           A2 19941228
                                                     US 1994-365259
                                                                           A2 19941228
                                                     WO 1999-US946
                                                                           W 19990113
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AB A multicomponent homogeneous polymer for cosmetic and hair compns. consists of (a) 30-90% of a N-vinyllactam, (b) 5- 30% of a quaternized and/or nonquaternized aminoalkylacrylic ester and/or -amide, (c) 0.5-30% of an unsatd. monomer,e.g., C4-22 alkyl, (d) 1-30% of an unsubstituted acrylic or methacrylic acid and/or an its amide, and (e) up to 20% of a mono- or di-functional polysiloxane;. The clear, colorless and conditioning film forming properties of the polymer produce a silky, lustrous appearance to the hair and long lasting styling hold. A homogeneous polymer was prepd. from acrylic acid 10, dimethylaminopropylmethacrylamide 17, octadecyl methacrylate 3, and N-vinylcaprolactam 70%. An EtOH soln. of Vazo-67 as the initiator was added to the monomer mixt. A hair aerosol spray was prepd. by dissolving the polymer in EtOH and adding the required amt. of water.

IT 234764-51-3P

RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

(hair formulations contg. homogeneous polymer of vinyllactam)

RN 234764-51-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymer with dodecyl 2-methyl-2-propenoate, .alpha.-(ethenyldimethylsilyl)-.omega.[(ethenyldimethylsilyl)oxy]poly[oxy(dimethylsilylene)],
1-ethenyl-2-pyrrolidinone and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 59942-04-0

CMF (C2 H6 O Si)n C8 H18 O Si2

CCI PMS

CM 2

CRN 2867-47-2 CMF C8 H15 N O2

$$\begin{array}{c|c} \text{O} & \text{CH}_2 \\ \parallel & \parallel \\ \text{Me}_2\text{N-CH}_2\text{--CH}_2\text{--O-C-C-Me} \end{array}$$

CM 3

CRN 142-90-5 CMF C16 H30 O2

$$$^{\rm O}_{\rm CH_2}$$$
 Me- (CH2) 11-O-C-C-Me

CM 4

CRN 88-12-0 CMF C6 H9 N O

CM 5

CRN 79-10-7 CMF C3 H4 O2

REFERENCE COUNT: REFERENCE(S):

- (1) Liu; US 5492988 A 1996 HCAPLUS (2) Liu; US 5523369 A 1996 HCAPLUS

L13 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2001 ACS ACCESSION NUMBER: 1999:481999 HCAPLUS

DOCUMENT NUMBER: 131:120621

TITLE: Powder compositions having improved dispersing

abilities containing powder and polysiloxane-

containing copolymers for cosmetics

INVENTOR(S): Tachibana, Kiyomi; Shimizu, Toru

PATENT ASSIGNEE(S): Kose Corp., Japan; Shin-Etsu Chemical Co., Ltd.

SOURCE: Eur. Pat. Appl., 34 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PA'	TENT	NO.		KI	ND	DATE			AF	PLI	CATI	ON N	Ο.	DATE			
EP	9315	37		A	2	1999	0728		ΕF	19	99-1	0033	6	1999	0113		
	R:	ΑT,	BE,	CH,	DE,	DK,	ES,	FR,	GB,	GR,	IT,	LI,	LU,	NL,	SE,	MC,	PT,
		ΙE,	SI,	LT,	LV,	FI,	RO										
JP	1126	3708		A.	2	1999	0928		JF	19	98-3	6846	9	1998	1210		
JP	1126	3706		A.	2	1999	0928		JF	19	98-3	6847	0	1998	1210		
CN	1230	398		Α		1999	1006		CN	19	99-1	0042	1	1999	0113		
PRIORIT	Y APP	LN.	INFO	. :					JP 19	98-	1821	7		1998	0113		
									TD 10	00	1001	0		1000	2112		

JP 1998-18218 19980113 AΒ A powder compn. comprises a copolymer contg. an organopolysiloxane monomer and one or more kinds of monomer selected from a group composed by a monomer contg. N group, a monomer possessing a polyoxyalkylene group, a monomer possessing a polylactone group, a monomer possessing a hydroxyl group and a monomer possessing an anionic group, and a powder. Further, a powder dispersion in oil comprising the copolymer, powder and oil, and a cosmetic compn. contg. them are disclosed. The powder compn. and a powder dispersion in oil have a less cohesion of powder particles and is superior in a dispersing ability and a dispersion stability. The cosmetic compn. which contains the powder compn. has a good stability and gives an excellent sensation at the actual use. A viscose liq. product was prepd. from CH2:CMeCO2(CH2)3(SiMe2O)nSiMe3 (n = 25) 92, acrylamide 1.6, styrene 2, toluene 100, and azobis(isobutyronitrile) 2 g. The product was combined with decamethylcyclopentasiloxane and ZnO to make a ZnO dispersion. A sunscreening W/O milky lotion contg. the ZnO dispersion was also prepd. The sunscreening lotion had a good dispersion stability.

IT 233591-50-9P 233591-52-1P 233591-53-2P

233591-96-3P

RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

(powder compns. contg. powder and polysiloxane-contg. copolymers for cosmetics)

RN 233591-50-9 HCAPLUS

CN 2-Propenoic acid, 2-ethylhexyl ester, polymer with .alpha.-[dimethyl[3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl]silyl]-.omega.[(trimethylsilyl)oxy]poly[oxy(dimethylsilylene)] and 1-ethenyl-2-pyrrolidinone, graft (9CI) (CA INDEX NAME)

CM 1

CRN 123109-42-2

CMF (C2 H6 O Si)n C12 H26 O3 Si2 CCI PMS

CM 2

CRN 103-11-7 CMF C11 H20 O2

CM 3

CRN 88-12-0 CMF C6 H9 N O

RN 233591-52-1 HCAPLUS

CN 2-Propenoic acid, 2-ethylhexyl ester, polymer with .alpha.- (butyldimethylsilyl)-.omega.-[[dimethyl[3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl]silyl]oxy]poly[oxy(dimethylsilylene)] and 1-ethenyl-2-pyrrolidinone, graft (9CI) (CA INDEX NAME)

CM 1

CRN 149925-73-5 CMF (C2 H6 O Si)n C15 H32 O3 Si2 CCI PMS

CRN 103-11-7 CMF C11 H20 O2

$$\begin{array}{c} \text{O} \\ \parallel \\ \text{CH}_2-\text{O-C-CH} \Longrightarrow \text{CH}_2 \\ \parallel \\ \text{Et-CH-Bu-n} \end{array}$$

CM 3

CRN 88-12-0 CMF C6 H9 N O

RN 233591-53-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with .alpha.-[dimethyl[3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl]silyl]-.omega.-[(trimethylsilyl)oxy]poly[oxy(dimethylsilylene)], 1-ethenyl-2-pyrrolidinone and octadecyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

CM 1

CRN 123109-42-2 CMF (C2 H6 O Si)n C12 H26 O3 Si2

CCI PMS

CM 2

CRN 32360-05-7 CMF C22 H42 O2

$$\begin{array}{c|c} & \text{O} & \text{CH}_2 \\ & || & || \\ \text{Me- (CH}_2)_{17} - \text{O- C- C- Me} \end{array}$$

CRN 88-12-0 CMF C6 H9 N O

CM 4

CRN 80-62-6 CMF C5 H8 O2

$$\begin{array}{c|c} \text{H}_2\text{C} & \text{O} \\ \parallel & \parallel \\ \text{Me--} \text{C---} \text{C---} \text{OMe} \end{array}$$

RN 233591-96-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with .alpha.-(butyldimethylsilyl).omega.-[[dimethyl[3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl]silyl]oxy]poly
[oxy(dimethylsilylene)], 1-ethenyl-2-pyrrolidinone, 2-ethylhexyl
2-methyl-2-propenoate and octadecyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 149925-73-5 CMF (C2 H6 O Si)n C15 H32 O3 Si2 CCI PMS

CM 2

CRN 32360-05-7 CMF C22 H42 O2

$$$^{\rm O}_{\rm CH_2}$$$
 Me- (CH2) 17 - O- C- C- Me

CRN 688-84-6 CMF C12 H22 O2

$$\begin{array}{c|c} & \text{O} & \text{CH}_2 \\ & \parallel & \parallel \\ & \text{CH}_2-\text{O}-\text{C}-\text{C}-\text{Me} \\ & \parallel \\ & \text{Et}-\text{CH}-\text{Bu-n} \end{array}$$

CM 4

CRN 88-12-0 CMF C6 H9 N O

CM 5

CRN 79-41-4 CMF C4 H6 O2

$$\begin{array}{c} \text{CH}_2 \\ || \\ \text{Me-C-CO}_2 \text{H} \end{array}$$

L13 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2001 ACS 1993:656283 HCAPLUS ACCESSION NUMBER:

DOCUMENT NUMBER: 119:256283

TITLE: Hair preparations containing

trimethylsiloxysilane-contg. vinyl polymers

INVENTOR(S): Uchama, Jujiro; Ogasawara, Motomi PATENT ASSIGNEE(S): Osaka Juki Kagaku Kogyo Kk, Japan Jpn. Kokai Tokkyo Koho, 12 pp. SOURCE:

CODEN: JKXXAF

DOCUMENT TYPE: Patent LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05213722	A2	19930824	JP 1992-23692	19920210
TD 2006522	D2	20000011		

B2 20000911

A mixt. comprising CH2:CR1CO2H (R1 = H, Me) 10-30, CH2:CR1 AB CO2(CH2)3Si(OSiMe3)3 (R1 = same as above) and/or CH2:CHSi(OSiMe3)3 1-20, CH2:CR1COR2 (R1 = same as above; R2 = C1-4 alkoxy, amide) 20-85, and N-vinylpyrrolidone 0-40 wt.% is polymd. to give a material useful in prepg. hair conditioners. The compns. show good hair -setting property and give gloss and smoothness to the hair. A hair prepn. contg. methacrylic acid-tert-Bu methacrylatemethacryloxypropyltris(trimethylsiloxy)silane copolymer aminomethylpropanol salt (prepn. given) was prepd.

IT 151372-09-7P 151372-19-9P 151372-31-5P

151372-33-7P

RL: PREP (Preparation)

(prepn. of, hair prepns. contg.)

151372-09-7 HCAPLUS RN

CN 2-Propenoic acid, 2-methyl-, polymer with 1,1-dimethylethyl 2-methyl-2-propenoate, 3-ethenyl-1,1,1,5,5,5-hexamethyl-3-[(trimethylsilyl)oxy]trisiloxane and 1-ethenyl-2-pyrrolidinone, compd. with 2-amino-2-methyl-1-propanol (9CI) (CA INDEX NAME)

CM

CRN 124-68-5 CMF C4 H11 N O

2 CM

CRN 151372-08-6

(C11 H30 O3 Si4 . C8 H14 O2 . C6 H9 N O . C4 H6 O2)x CMF

CCI

CRN 5356-84-3

CMF C11 H30 O3 Si4

CM 4

CRN 585-07-9 CMF C8 H14 O2

$$\begin{array}{c|c} & \text{O} & \text{CH}_2 \\ || & || \\ \text{t-BuO-C-C-Me} \end{array}$$

CM 5

CRN 88-12-0 CMF C6 H9 N O

CM 6

CRN 79-41-4 CMF C4 H6 O2

$$\begin{array}{c} \text{CH}_2 \\ || \\ \text{Me-C-CO}_2 \text{H} \end{array}$$

RN 151372-19-9 HCAPLUS

CN 2-Propenoic acid, polymer with 1,1-dimethylethyl 2-propenoate, 3-ethenyl-1,1,1,5,5,5-hexamethyl-3-[(trimethylsilyl)oxy]trisiloxane and 1-ethenyl-2-pyrrolidinone, compd. with 2-amino-2-methyl-1-propanol (9CI) (CA INDEX NAME)

CM 1

CRN 124-68-5

CMF C4 H11 N O

$$\begin{array}{c} \operatorname{NH2} \\ | \\ \operatorname{Me-C-CH2-OH} \\ | \\ \operatorname{Me} \end{array}$$

CM 2

CRN 151372-18-8

CMF (C11 H30 O3 Si4 . C7 H12 O2 . C6 H9 N O . C3 H4 O2) x

CCI PMS

CM 3

CRN 5356-84-3

CMF C11 H30 O3 Si4

$$\begin{array}{c} \text{O-SiMe3} \\ \mid \\ \text{Me3Si-O-Si-CH} \end{array} \\ \leftarrow \begin{array}{c} \text{CH}_2 \\ \mid \\ \text{O-SiMe3} \end{array}$$

CM 4

CRN 1663-39-4 CMF C7 H12 O2

CM 5

CRN 88-12-0 CMF C6 H9 N O

CM 6

CRN 79-10-7

CMF C3 H4 O2

RN 151372-31-5 HCAPLUS

CN 2-Propenoic acid, polymer with 1,1-dimethylethyl 2-propenoate, N-(1,1-dimethyl-3-oxobutyl)-2-propenamide, 3-ethenyl-1,1,1,5,5,5-hexamethyl-3-[(trimethylsilyl)oxy]trisiloxane and 1-ethenyl-2-pyrrolidinone, compd. with 2-amino-2-methyl-1-propanol (9CI) (CA INDEX NAME)

CM 1

CRN 124-68-5 CMF C4 H11 N O

CM 2

CRN 151372-30-4 CMF (C11 H30 O3 Si4 . C9 H15 N O2 . C7 H12 O2 . C6 H9 N O . C3 H4 O2)x CCI PMS

CM 3

CRN 5356-84-3 CMF C11 H30 O3 Si4

CM 4

CRN 2873-97-4 CMF C9 H15 N O2

CRN 1663-39-4 CMF C7 H12 O2

$$t-BuO-C-CH \longrightarrow CH_2$$

CM 6

CRN 88-12-0 CMF C6 H9 N O

CM 7

CRN 79-10-7 CMF C3 H4 O2

RN 151372-33-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 1,1-dimethylethyl 2-methyl-2-propenoate, ethenyl acetate, 3-ethenyl-1,1,1,5,5,5-hexamethyl-3-[(trimethylsilyl)oxy]trisiloxane and 1-ethenyl-2-pyrrolidinone, compd. with 2-amino-2-methyl-1-propanol (9CI) (CA INDEX NAME)

CM 1

CRN 124-68-5 CMF C4 H11 N O

CRN 151372-32-6

CMF (C11 H30 O3 Si4 . C8 H14 O2 . C6 H9 N O . C4 H6 O2 . C4 H6 O2) x

CCI PMS

CM 3

CRN 5356-84-3

CMF C11 H30 O3 Si4

$$\begin{array}{c} \text{O-SiMe3} \\ \mid \\ \text{Me3Si-O-Si-CH} \end{array} \\ \leftarrow \begin{array}{c} \text{CH}_2 \\ \mid \\ \text{O-SiMe3} \end{array}$$

CM 4

CRN 585-07-9 CMF C8 H14 O2

CM 5

CRN 108-05-4 CMF C4 H6 O2

 $AcO-CH=CH_2$

CM (

CRN 88-12-0 CMF C6 H9 N O

$$CH = CH_2$$

$$N = O$$

CRN 79-41-4 CMF C4 H6 O2

$$\begin{array}{c} \text{CH}_2 \\ || \\ \text{Me-C-CO}_2 \text{H} \end{array}$$

L13 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2001 ACS ACCESSION NUMBER: 1993:175496 HCAPLUS

DOCUMENT NUMBER: 118:175496

TITLE: Hair preparations containing film-forming

copolymers

INVENTOR(S): Uchiyama, Yujiro; Ogasawara, Motomi

PATENT ASSIGNEE(S): Osaka Yuku Kagaku Kogyo Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04321618	A2	19921111	JP 1991-86890	19910418
JP 3192159	B2	20010723		

Hair prepns. contain bases prepd. by copolymn. of monomers contg. 40-95 wt.% N-vinylbutyrolactam or N-vinylcaprolactam and 1-30 wt.% CH2:CR1CO2(CH2)3Si(OR2)(OR3)OR4 and/or CH2:CHSi(OR2)(OR3)OR4 (R1 = H, Me; R2, R3, R4 = Me, Et, .beta.-methoxyethoxy, Ac). The copolymers form glossy films on the hair in setting by hair driers.

Vinyl acetate 15, 2-hydroxyethyl methacrylate 10, vinyltriethoxysilane 10, and N-vinylpyrrolidine 65 parts were polymd. using AIBN in EtOH at 80.degree. for 12 h to give an EtOH soln. contg. 60% copolymer (av. mol. wt. 63 .times. 103), which showed good compatibility with H2O and LPG and good curl retention property.

IT 146796-88-5P

RL: PREP (Preparation)

(prepn. of, hair-setting compns. contg., film-forming)

RN 146796-88-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with ethenyl acetate, 1-ethenyl-2-pyrrolidinone, ethenyltriethoxysilane and 2-hydroxyethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 868-77-9 CMF C6 H10 O3

CM 2

CRN 585-07-9 CMF C8 H14 O2

CRN 108-05-4 CMF C4 H6 O2

AcO-CH-CH2

CM 4

CRN 88-12-0 CMF C6 H9 N O

CM 5

CRN 78-08-0 CMF C8 H18 O3 Si

L13 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2001 ACS ACCESSION NUMBER: 1992:657967 HCAPLUS

DOCUMENT NUMBER: 117:257967

TITLE: Hair preparations containing acrylate

polymers

INVENTOR(S): Uchiyama, Yujiro; Ogasawara, Motomi

PATENT ASSIGNEE(S): Osaka Yuki Kagaku Kogyo Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DOCUMENT TYPE:

Patent Japanese

LANGUAGE: Japane FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE

JP 04154712 A2 19920527 JP 1990-277237 19901015

AB A hair prepn. which gives luster and body to the hair contains copolymers of acrylic acid esters, N-vinylpyrrolidone, and ethylene-type unsatd. monomers. Thus, 85 % dimethylaminoethyl methacrylate sulfate-EtOH soln. 47, methacryloxypropyl(trimethylsiloxy)dim ethylsilane 10, tert-Bu methacrylate 50, and anhyd. EtOH 143 parts by wt. were mixed and polymd. in the presence of a polymn. initiator. The product was dissolved in EtOH to give a hair prepn.

IT 144719-07-3 144719-08-4 144770-75-2

144770-76-3

RL: BIOL (Biological study)
 (hair prepns. contg.)

RN 144719-07-3 HCAPLUS

CN Ethanaminium, N-ethyl-N,N-dimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]-, ethyl sulfate, polymer with dodecyl 2-methyl-2-propenoate, 1-ethenyl-2-pyrrolidinone methyl 2-methyl-2-propenoate and 3-(pentamethyldisiloxanyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 18151-85-4 CMF C12 H26 O3 Si2

CM 2

CRN 142-90-5 CMF C16 H30 O2

$$\begin{array}{c|c} \text{O} & \text{CH}_2 \\ \parallel & \parallel \\ \text{Me-(CH}_2)_{11} - \text{O-C-C-Me} \end{array}$$

CRN 88-12-0 CMF C6 H9 N O

CM 4

CRN 80-62-6 CMF C5 H8 O2

$$\begin{array}{c|c} ^{H2C} & \text{O} \\ \parallel & \parallel \\ \text{Me-} \text{C-} \text{C-} \text{OMe} \end{array}$$

- CM 5

CRN 13223-03-5

CMF C10 H20 N O2 . C2 H5 O4 S

CM 6

CRN 48063-69-0 CMF C10 H20 N O2

$$\begin{array}{c|c} ^{\rm H2C} & {\rm O} & {\rm Me} \\ \parallel & \parallel & \parallel \\ {\rm Me-C-C-O-CH_2-CH_2-N \stackrel{+}{-} Et} \\ & & Me \end{array}$$

CM 7

CRN 48028-76-8 CMF C2 H5 O4 S

Et-0-503-

RN 144719-08-4 HCAPLUS

CN Ethanaminium, N-ethyl-N,N-dimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]-, ethyl sulfate, polymer with 1-ethenyl-2-pyrrolidinone, ethyl 2-propenoate, 2-hydroxyethyl 2-methyl-2-propenoate and 3-(pentamethyldisiloxanyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 18151-85-4 CMF C12 H26 O3 Si2

CM 2

CRN 868-77-9 CMF C6 H10 O3

CM 3

CRN 140-88-5 CMF C5 H8 O2

CM 4

CRN 88-12-0 CMF C6 H9 N O

CM 5

CRN 13223-03-5

CMF C10 H20 N O2 . C2 H5 O4 S

CM 6

CRN 48063-69-0 CMF C10 H20 N O2

CM 7

CRN 48028-76-8 CMF C2 H5 O4 S

Et-0-503-

RN 144770-75-2 HCAPLUS

CN Ethanaminium, N-ethyl-N,N-dimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]-, ethyl sulfate, polymer with 1,1-dimethylethyl 2-methyl-2-propenoate, 1-ethenyl-2-pyrrolidinone and 3-(pentamethyldisiloxanyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 18151-85-4 CMF C12 H26 O3 Si2

CM 2

CRN 585-07-9 CMF C8 H14 O2

CM 3

CRN 88-12-0 CMF C6 H9 N O

CM 4

CRN 13223-03-5

CMF C10 H20 N O2 . C2 H5 O4 S

CM 5

CRN 48063-69-0 CMF C10 H20 N O2

CM 6

CRN 48028-76-8 CMF C2 H5 O4 S

Et-0-503-

RN 144770-76-3 HCAPLUS

CN Ethanaminium, N-ethyl-N,N-dimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]-, ethyl sulfate, polymer with 1,1-dimethylethyl 2-methyl-2-propenoate, dodecyl 2-methyl-2-propenoate, 1-ethenyl-2-pyrrolidinone and 3-(pentamethyldisiloxanyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 18151-85-4 CMF C12 H26 O3 Si2

$$\begin{array}{c|c} & \text{O} & \text{CH}_2 \\ \parallel & \parallel \\ \text{t-BuO-C-C-Me} \end{array}$$

$$$^{\mbox{O}}_{\mbox{CH}_2}$$$
 Me- (CH2) 11- O- C- C- Me

$$\begin{array}{c|c} ^{H2C} & \text{O} & \text{Me} \\ \parallel & \parallel & \parallel \\ \text{Me}-\text{C}-\text{C}-\text{O}-\text{CH}_2-\text{CH}_2-\text{N} \stackrel{+}{-} \text{Et} \\ \parallel & \parallel \\ & \text{Me} \end{array}$$

FUBARA 09/762,039

CRN 48028-76-8 CMF C2 H5 O4 S

Et-0-503-